Remarks/Arguments

These remarks are in response to the Office Action dated March 24, 2006. This reply is timely filed. At the time of the Office Action, claims 1-59 were pending in the application. Claims 1-59 were rejected under 35 USC §102(e). The rejections are set out in more detail below.

I. Brief Review of Applicants' Invention

Prior to addressing the Examiner's rejections on the art, a brief review of applicants' invention is appropriate. The invention relates to an improved method for film encoding to facilitate the identification of the source of films illegally copied by camcorders and to media encoded in accordance with the method. Specifically, the invention is a method and apparatus for uniquely identifying a copy of a motion picture disposed on a media. The method can include the steps of selecting two or more motion picture scenes, where each of the scenes comprises an identifiable portion of the motion picture distinct from every other portion of the motion picture. Once the scenes have been identified, two or more sequences can be defined within each of the motion picture scenes such that each sequence includes two or more of frames. Once the scenes and sequences have been selected, the method can continue with the step of selectively marking at least one of the sequences from each scene to collectively define a uniquely identifiable marking arrangement or pattern on the media.

The mark that is applied to a frame can include any modification of the media that will produce a visually identifiable feature when the frame is displayed. For example, the feature can be a single dot, a constellation or grouping of dots arranged in a particular pattern, a pattern of straight or curved lines and any combination thereof. Dots can be of any particular shape including circles, ovals, ellipses, polygons, and any other regular or irregular shape. Even a mark that appears to be a random scratch can be used for this purpose, provided that the scratch is readily identifiable when the frame is displayed. According to one embodiment, the choice of mark can be without limitation, except to the extent that it can be identified at a later time. This can be a significant advantage because the marks can be formed in such a way as to be

relatively difficult to identify and remove by illicit copiers. Alternatively, the mark itself can be coded in such a way as to have some further meaning.

II. Claim Rejections Under 35 U.S.C. §102(e)

Claims 1-59 were rejected under 35 USC §102(e) as being anticipated by U.S. Published Patent Application No. 2002/0122490 A1 to Lin, et al. According to the Examiner, Lin, et al. discloses uniquely watermarking motion pictures at areas with little movement (see [0022], [0038], and [0044]). However, with all due respect to the Examiner, applicant submits that Lin et al. does not meet the claim limitations of claims 1-59 and that Lin et al. does not disclose uniquely watermarking motion pictures at areas with little movement as the Examiner has stated.

Briefly, Lin et al. relates to an improvement in error-recovery for corrupted MPEG bitstreams. More particularly, Lin et al. discloses a decoder for motion-picture-experts group (MPEG-4) video which detects start codes at the beginning of video object planes (VOP) and resync markers at the start of each video packet (VP) in the VOP. When an error occurs in the bitstream, a parser searches for a next start code or resync marker to find the start of the next video packet. A partial match of the unique start-code bit sequence signals a fuzzy match, allowing the VOP header and data to be decoded even when bit errors occur in the VOP start code. A fuzzy match of the shorter resync marker can also be enabled. Fuzzy matching of VOP start codes and resync markers allows for faster recovery from corrupted bitstreams such as those transmitted over wireless networks.

In contrast, independent claims 1, 23, 45 and 46 require a method or apparatus for uniquely identifying a copy of a motion picture disposed on a media wherein the motion picture includes a plurality of motion picture scenes wherein each motion picture scene is distinct from every other motion picture scene, each motion picture scene includes a plurality of frames, and a mark on at least one of the frames from each scene so that the marks collectively define a uniquely identifiable marking pattern. The uniquely identifiable marking pattern is used to identify the particular copy of the motion picture which can be used to identify the source of an illegal copy of the motion picture.

This uniquely identifiable marking pattern is not equivalent to the start codes at the beginning of video object planes (VOP) and resync markers at the start of each video packet (VP) in the VOP in Lin, et al.

The start codes and resynsc markers in the MPEG-4 video are strictly for the decoding of the bitsream and for correcting errors when an error in the bitstream is detected. As previously discussed, when an error occurs in the bitstream, the parser searches for a next start code or resync marker to find the start of the next video packet. A partial match of the unique start-code bit sequence signals a fuzzy match, allowing the VOP header and data to be decoded even when bit errors occur in the VOP start code. The start code at the beginning of the video object planes (VOP) and the resync marker at the start of each video packet (VP) when viewed collectively do not define a uniquely identifiable pattern as is required by each of claims 1, 23, 45 and 46. In fact, there is no disclosure whatsoever in the Lin, et al. (MPEG-4) video for utilizing any apparatus, methodology, marks, encoding, or indicia for marking and identifying the particular copy of the (MPEG-4) video.

Thus, the rejection of claims 1, 23, 45 and 46 under 35 USC §102(e) as being anticipated by U.S. Published Patent Application No. 2002/0122490 A1 to Lin, et al. is improper and must be withdrawn. The rejection of claims 2-22, 24-44, and 47-50 is improper by virtue of their dependence on allowable base claims 1, 23, 45 and 46 and such rejection must also be withdrawn.

Similarly, independent claims 51, 55, and 59 claim, respectively, a security coded motion picture, a method for security coding a motion picture, and an apparatus for security coding a motion picture which includes a motion picture recording comprised of a plurality of frames each containing an image associated with the motion picture, at least one predetermined frame of the motion picture defining a reference point relative to which a plurality of other frames can be uniquely identified, and a mark in at least one of the frames relative to the reference point uniquely identifying a particular production copy of the motion picture.

However, in Lin, et al. there is no predetermined frame of the motion picture defining a reference point relative to which a plurality of other frames can be uniquely identified. If there is such a predetermined frame, applicant requests the Examiner specifically identify it for applicant. If the Examiner contends that a video object plane (VOP) in Lin, et al. is equivalent to a frame as recited in claims 51, 55, and 59, applicant hereby specifically disputes that contention. Even if a video object plane (VOP) were to be considered by the Examiner to be equivalent to a frame, a VOP does not define a reference point relative to which a plurality of other video object planes can be uniquely identified. The start code at the beginning of each VOP strictly identifies it as a VOP to the decoder. Likewise, applicant submits that a video packet (VP) cannot be construed as being equivalent to a frame since it is a packet of data that is only a portion of an image. The resync marker at the beginning of the video packet (VP) strictly identifies it as a video packet (VP) to the decoder.

Further, Lin, et al. does not disclose a mark in the purported at least one of the frames or otherwise relative to a reference point uniquely identifying a particular production copy of the motion picture. As previously discussed, the start codes at the beginning of video object planes (VOP) or the resync markers at the start of each video packet (VP) are strictly for the decoding of the bitstream and for correcting errors when an error in the bitstream is detected. There is no way start codes or resync markers can be utilized individually or collectively, relative to a reference point or otherwise, to uniquely identify a particular production copy of the motion picture.

Thus, the rejection of claims 51, 55, and 59 under 35 USC §102(e) as being anticipated by U.S. Published Patent Application No. 2002/0122490 A1 to Lin, et al. is improper and must be withdrawn. The rejection of claims 51-54 and 56-58 is improper by virtue of their dependence on allowable base claims 51 and 55 and such rejection must also be withdrawn.

III. Conclusion

Applicants have made every effort to present claims which distinguish over the prior art, and it is believed that all claims are in condition for allowance. Nevertheless, Applicants invite the Examiner to call the undersigned if it is believed that a telephonic interview would expedite the prosecution of the application to an allowance. In view of the foregoing remarks, Applicants respectfully request reconsideration and prompt allowance of the pending claims.

Respectfully submitted,

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Date

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